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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,621	02/01/2001	Katsumi Kanehira	202686US2TTC	8152

22850 7590 08/25/2004

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ALEXANDRIA, VA 22314

EXAMINER
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LAU, TUNG S

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/774,621

Applicant(s)

KANEHIRA ET AL.

Examiner

Tung S Lau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-45 is/are pending in the application.
- 4a) Of the above claim(s) 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,15,18,19 and 37 is/are rejected.
- 7) ☒ Claim(s) 4-8, 11,12, 14,38-45, 16, 28, 29-35, 9, 10, 13, 17, 20-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claim 36 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention as noted in paper number 3-17-2004.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 19, 15, 18, 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kondou et al. (U.S. Patent 5,221,893).

Regarding claim 1:

Kondou discloses a deterioration diagnosis method, comprising the steps of formulating a corrosion loss of a metallic material to exposure days under an atmospheric condition as a function of environmental assessment points which represent a level of harmfulness of said atmospheric condition (Col. 9, Lines 3-16); and diagnosing a life span of said metallic material based upon said corrosion loss calculated by using said function (fig. 2, 3, 6). wherein said environmental assessment points are a sum of multiplications of separate assessment points for each of a plurality of environmental factors.

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including temperature, humidity, corrosive gas. sea salt particles in an atmospheric environment (Col. 9, Lines 3-27) or a distance from a coast. assigned to each factor according to an amount of each factor. and a weighting coefficient for each factor.

Regarding claim 2:

Kondou discloses a deterioration diagnosis method, comprising the steps of: formulating a corrosion speed of a metallic material under an atmospheric condition as a function of environmental assessment points which represent a level of harmfulness of said atmospheric condition (Col. 9, Lines 3-16), and diagnosing a life span of said metallic material based upon said corrosion speed calculated by using said function (fig. 2, 3, 6).

wherein said environmental assessment points are a sum of multiplications of separate assessment points for each of a plurality of environmental factors. including temperature, humidity, corrosive gas. sea salt particles in an atmospheric environment (Col. 9, Lines 3-27) or a distance from a coast. assigned to each factor according to an amount of each factor. and a weighting coefficient for each factor.

Regarding claim 19:

Kondou discloses 1a deterioration diagnosis equipment, comprising: an input unit for inputting a measured value of an amount of each environmental factor

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measured by an environmental factor amount measurement unit (Col. 9, Lines 3-16); a first database for storing a function giving a relationship to an amount of each environmental factor and assessment points for each factor (fig. 5, unit S1), a second database for storing function giving relationships between environmental measurement points and assessment points for each factor for each type of metallic material, a plurality of assessment points for each factor calculation unit for calculating said assessment points for each factor using said function read out from said first database and an amount of each environmental factor input by said input unit (fig. 5, unit S6); an environmental assessment points calculation unit for calculating environmental assessment points which represent a level of the harmfulness of an atmospheric environment using said function read out from said second database and each environment factor calculated by said assessment points for each factor calculation (fig. 5, unit S6); a corrosion loss calculation unit for calculating a relationship between an amount of corrosion loss of said metallic material under said atmospheric environment and a number of exposure days using a function in which environmental assessment points calculate by said environmental assessment points calculation unit are formulated as a variable (fig. 5, unit S6); a corrosion speed calculation unit for calculating said corrosion speed of a metallic material under said atmospheric environment using a function in which said environmental assessment points calculated by said environmental assessment points calculation unit are formulated as a variable; a corrosion loss correction

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calculation unit for correcting said relationship between said corrosion loss and said number of exposure days calculated by said corrosion loss calculation unit based on said corrosion loss of said metallic material in said number of exposure days of said prescribed period (fig. 6); a corrosion speed calculation unit for correcting said corrosion speed calculated by said corrosion speed calculation mean based on said amount of corrosion loss of said metallic material in said number of exposure days of said prescribed period; a remaining life span calculation unit for calculating a remaining life span of said metallic material based on said relationship between said corrosion loss corrected by said corrosion loss correction unit and said number of exposure days (fig. 6), or based on said corrosion speed corrected by said corrosion speed correction unit; and an output unit for outputting said remaining life span of each metallic material calculated by said remaining life span calculation unit as diagnosis result (fig. 7, 8).

Regarding claims 15, 18, 37:

Kondou discloses using multiplication factor of environment factors including humidity, temperature, corrosive gas, sea particle in the environment (Col. 7-8, Lines 55-60, Col. 9, Lines 3-16); measure with specific period (fig. 2); corrosive speed calculation is corrected (fig. 5, unit S6); configured to instruct a computer to carry out the calculation (fig. 1, 5).

### ***Claim Objections***

3. Claims 4-8, 11,12, 14,38-45, 16, 28, 29-35, 9, 10, 13, 17, 20-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach calculating using distance from the coast; the acid gas calculating using alkaline filter paper with potassium carbonate with %; using square root of number of expose days; linear expression of a square root of number of days; amount of weight loss due to exposure days; the material constituting an electronic circuit; using environmental classification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

4. Applicant's arguments filed 7/19/200 have been fully considered but they are not persuasive.

**A.** Applicant argues in the lengthy arguments that the prior art does not show the 'plurality of assessment points calculation factor'. Kondou discloses 'plurality of assessment points calculation factor' in Col. 9, Lines 3-27. Reminds to the applicants that while the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonably allowed. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

**B.** Applicant continues to argue in the lengthy arguments that the prior art does not show the 'first, second database for storing function relationship to environmental factor'. Kondou discloses the 'first, second database for storing function relationship to environmental factor' in Col. 9, Lines 3-27, fig. 1, unit 3, 4, fig. 2, fig. 3, fig. 5, unit S4, fig. 6 8. Reminds to the applicants that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).



### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

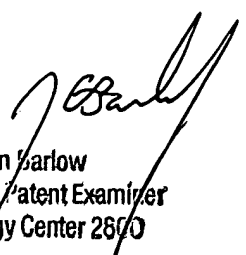
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**5.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL

  
John Barlow  
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Technology Center 2863